

DRILL HOLES

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BORDER REV. DATE: JUNE 11, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal with interconnect at the intersection of MD 212 (Riggs Road) and Fair Oak Avenue in Prince George's County. The existing strain poles shall be replaced with mast arms, LED signal heads and side street detection video detection camera. MD 212 (Riggs Road) is assumed to run in a north-south direction.

II. INTERSECTION OPERATION

- The intersection is to operate in a NEMA three-phase, fully-actuated mode, with the MD 212 (Riggs Road) approaches running concurrently. Countdown pedestrian signal heads with audible pushbutton actuation shall be installed across the south leg MD 212 (Riggs Road) east leg of Fair Oak Avenue. The Fair Oak Avenue approaches shall operate as normal side street phase.
- The existing full-traffic-actuated, eight-phase pole mounted controller shall be replaced with a proposed base mounted controller with all necessary equipment housed in a NEMA size 6" base-mounted cabinet shall be utilized at this intersection.
- SHA signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the SHA Signal Shop for testing and programming.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the S.H.A. Signal Shop Contact Mr. Ed Rodenhizer at (410) 787-7650 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- Upon completion of this project, the Contractor shall notify Mr. Robert Snyder at (410) 787-7631 to arrange for the phone line installation. The Contractor is to provide Mr. Robert Snyder with the nearest street address, zip code and phone number.

5. APS will function as follows:

FOR MD 212 (RIGGS ROAD)

- When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross Riggs at Fair Oak."
- When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

FOR Fair Oak Avenue

- When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross Fair Oak at Riggs"
- When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

The contact persons for District #3 (Montgomery County) are as follows:

Mr. Brian Young
Assistant District Engineer - Traffic
Phone: (301) 513-7318

Mr. Ed Rodenhizer
Chief, Signal Operations
410-787-7652

Mr. Vernon Stinnett Jr.
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

Mr. Sonny Bailey
Chief, Sign Shop
410-787-7676

Mr. Augie Rebish
District Engineer - Utility
Phone: (301) 513-7350

The power company representative is:

Mr. Steve Custer
PEPCO Customer Design
201 W Gude Dr.
Rockville, MD 20850
Phone: 301 548-4333

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CAT NO.	DESCRIPTION	QUANTITY
900000	VIDEO INTERFACE EQUIPMENT	1 EA
971017	EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNT	1 EA
973023	SHEET ALUMINIUM SIGNS	62 SF

D-3(1) "Fair Oak Ave (RT <Arrow>" sign, (dual faced) (variable x 16").

2 EA

D-3(1) "Riggs Road" sign, (Dual Face) (variable x 16").

1 EA

Pedestrian education R10-3(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS RIGGS ROAD").

2 EA

Pedestrian education R10-3(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS FAIROAK AVENUE").

2 EA

GUIDE SHIELD ASSEMBLY (48"x75") pole mounted. M3-1 "NORTH" (30"x15") M1-5 "MD 212" (48"x36") M6-1 "left arrow" (30"x24")

1 EA

GUIDE SHIELD ASSEMBLY (30"x51") pole mounted. M5-3 "SOUTH" (24"x12") M1-5 "MD 212" (30"x24") M6-1 "right arrow" (21"x15")

1 EA

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CAT NO.	DESCRIPTION	QUANTITY
203030	TEST PIT EXCAVATION	6 CY
800000A	16" COUNTDOWN PEDESTRIAN SIGNAL HEAD	4 EA
800000A	2 WIRE CONTROL UNIT	1 EA
800000A	AUDIBLE TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS	4 EA
800000A	1 CONDUCTOR (NO. 250 KCMIL) ELECTRICAL CABLE	300 LF
801004	CONCRETE FOR SIGNAL FOUNDATION	12 CY
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	830 LF
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	150 LF
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	375 LF
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	200 LF
805150	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED	150 LF
805155	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED	550 LF
807202	METERED SERVICE PEDESTAL	1 EA
810010	ELECTRICAL CABLE - 1 CONDUCTOR (NO. 4 AWG)	125 LF
810601	NONINVASIVE DETECTOR 500 FOOT LEAD IN CABLE	6 EA
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	9 EA
813014	INSTALL GROUND MOUNTED SIGN	4 SF
813015	INSTALL OVERHEAD SIGN	60 SF
816001	VIDEO DETECTION CAMERA	1 EA
816010	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	1 EA
818004	10 FOOT BREAKAWAY PEDESTAL POLE	4 EA
818021	STEEL POLE WITH A TWIN 50 FOOT MAST ARM	1 EA
818030	STEEL POLE WITH A SINGLE 38 FT MAST ARM	1 EA
831010	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE	2 EA
837001	GROUND ROD 3/4 INCH DIAMETER X 10 FOOT LENGTH	8 EA
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	18 EA
860292	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	1 EA
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	315 LF
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	375 LF
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	700 LF
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)	350 LF
866104	20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	2 EA
871202	INSTALL CONTROLLER CABINET - BASE MOUNT	1 EA
800000	REMOVE AND DISPOSE EXISTING EQUIPMENT	1 EA
800000	DISCONNECT, PULLBACK, AND REROUTE INTERCONNECT CABLE	150 LF

C. EQUIPMENT TO BE REMOVED

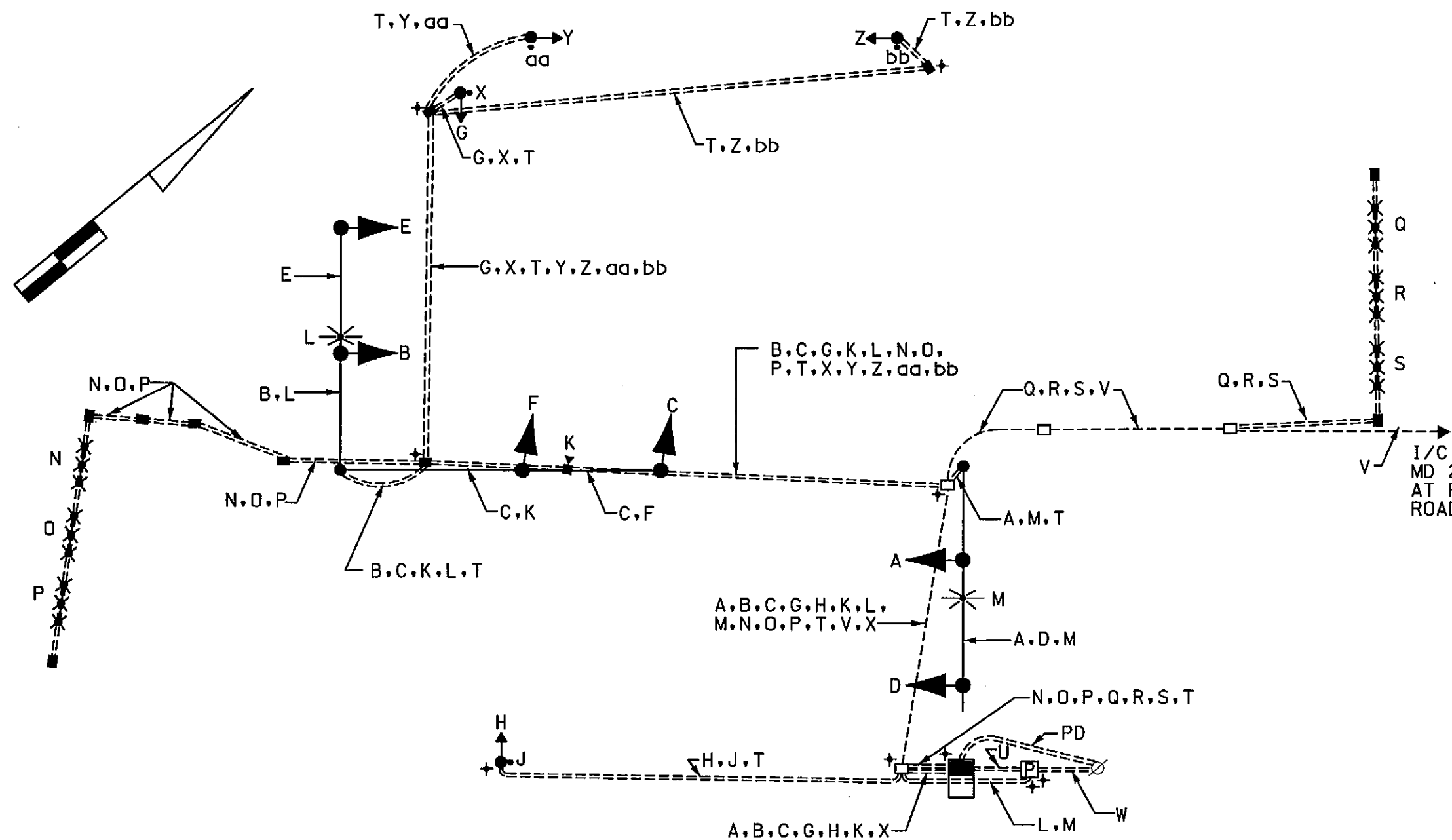
SHA Forces shall remove the controller and all auxiliary equipment from the controller cabinet. The cabinet and all other removed signal materials are to become property of the contractor.

PHASE CHART

1	2	3	4	5	6	7	8	9	10
(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)
(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)
(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)

PHASE 2 & 6	G	G	G	G	R	R	DW	DW	WK	WK
2 & 6 CHANGE	Y	Y	Y	Y	R	R	DW	DW	FL/DW	FL/DW
PHASE 4	R	R	R	R	G	G	DW	DW	DW	DW
4 CHANGE	R	R	R	R	Y	Y	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	G	G	WK	WK	DW	DW
PED CLEAR / COUNTDOWN	R	R	R	R	G	G	FL/DW	FL/DW	DW	DW
4 ALT CHANGE	R	R	R	R	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

- A 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- B 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- C 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- D 2-CONDUCTOR ELECTRICAL TRAY CABLE (NO. 12 A.W.G.)
- E NON-INVASIVE DETECTOR 1000 FOOT LEAD IN CABLE
- F STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- G 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- H DISCONNECT, PULLBACK, REROUTE INTERCONNECT CABLE
- I 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 250 KCMIL)
- J PROPOSED PHONE DROP
- K GROUND ROD



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5596bgl.dgn

T-187

PLOTTED: 04/24/2004
FILE: 04/24/2004

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
**MD 212 (RIGGS ROAD)
AND
FAIROAK AVENUE**
CHILLUM, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE 2/19/09 CONTRACT NO. PG7095177

DESIGNED BY James Allen Jr. COUNTY PRINCE GEORGES

DRAWN BY James Allen Jr. LOGMILE 16021200.46

CHECKED BY TMS NO. J224

F.A.P. NO. TOD NO.

TS NO. DRAWING NO. 2 OF 2 SHEET NO. OF